

*Citation for published version:*

Goodbody, A 2017, Telling the story of climate change: the German novel in the Anthropocene. in C Schaumann & H Sullivan (eds), *German Ecocriticism in the Anthropocene*. Literatures, Cultures, and the Environment , Palgrave Macmillan, Basingstoke, U. K., pp. 293-314. [https://doi.org/10.1057/978-1-137-54222-9\\_16](https://doi.org/10.1057/978-1-137-54222-9_16)

*DOI:*

[10.1057/978-1-137-54222-9\\_16](https://doi.org/10.1057/978-1-137-54222-9_16)

*Publication date:*

2017

*Document Version*

Peer reviewed version

[Link to publication](#)

Goodbody, A., 'Telling the story of climate change: the German novel in the Anthropocene'. In C. Schaumann, & H. Sullivan (Eds.), *German Ecocriticism in the Anthropocene*, pp. 293-314. Basingstoke, U. K.: Palgrave Macmillan. Reproduced with permission of Palgrave Macmillan.

**University of Bath**

## **Alternative formats**

If you require this document in an alternative format, please contact:  
[openaccess@bath.ac.uk](mailto:openaccess@bath.ac.uk)

**General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

**Take down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

## **Telling the Story of Climate Change: The German Novel in the Anthropocene**

Axel Goodbody, University of Bath Spa

### **1. Literature and literary criticism in the Anthropocene**

The term ‘Anthropocene’ was first introduced by the atmospheric chemist Paul Crutzen and the ecologist Eugene Stoermer in 2000, to denote a new geological epoch in which humanity has become an agent of change on a global scale. Millions of years hence, traces of this change will be discernible as a rock record of higher levels of radioactivity and acidification, the mass extinction of species, and in layers of plastic and other waste. Whether we should regard Earth as having left the Holocene, the post-glacial epoch which has lasted for the last 12,000 years, and entered a new age, has yet to be officially decided, and there is no agreement as to its starting date. Crutzen and Stoermer chose the Industrial Revolution, on the basis of the altered concentration of greenhouse gases in the atmosphere, but others have argued forcibly for the decade after the Second World War, which saw nuclear testing and the Great Acceleration of human population, urbanization, resource consumption and industrial production. Either way, the notion of an ‘Anthropocene’ has already prompted a good deal of thinking outside the Earth Sciences because of its political, social and ethical implications. It makes us responsible for managing the state of the planet, for the lives and wellbeing of future generations, and the continuing existence of other larger non-human species.

In 2009 the historian and postcolonial theorist Dipesh Chakrabarty published an influential essay on the significance of the Anthropocene for his discipline. The conception of humanity collectively acting as a geophysical force made us see in a new light the striving for ever greater freedom from natural limits, seemingly without cost, which characterized human

history since the Enlightenment. If we are to avert the looming catastrophe, Chakrabarty wrote, we must acknowledge that humanity's very existence is dependent on maintaining certain environmental parameters. The Anthropocene thus undermines the traditional separation of human history from natural history, and reveals a blind spot in the world view of contemporary postcolonial historians, who have tended to assume that political emancipation will go hand in hand with ever greater mastery over nature. From now on, the history of modernity and global capital must be depicted in the context of that of humanity as a species.

Chakrabarty's thinking on the challenges which this geologically oriented perspective presents has since been extended to the axioms and practices of other humanities disciplines, which have begun to reflect critically on its social, cultural, ethical and aesthetic implications. The postcolonial perspective of simultaneous progress towards emancipation from colonial exploitation and subjection to natural limitations has emerged as just one of a number of inherited narratives by which the meanings which we attribute to climate change are conditioned, and which determine, alongside social relations, how it is perceived and responded to. The founding myths of individual nations play a role: many North Americans, for instance, see state programs for climate change mitigation as a crypto-Communist threat to individual liberty, a value embodied in the myths of the rugged frontiersman and the self-made man. The rejection of climate legislation by some Australians has been traced back to the perception of nature as something to be fought against and brought under control associated with 'mateship,' a value embodied in the stereotype of the settler battling to make a life in a land beset by droughts, fires and floods, suggesting humans are innocent victims whose only moral responsibility is to help their fellow men. German climate sceptics tend to present themselves as standing in the tradition of Enlightenment critics of religious mystification, or as following in the footsteps of Martin

Luther, who protested against the corruption of the Roman Catholic Church and its exploitation of fears for the future through the sale of indulgences. (Bachmann, Maxeiner)

Some of the stories embedded deep in Western culture, for instance Greek myths of hubris and punishment (Prometheus, Icarus) and Biblical narratives (expulsion from Eden, the Flood, the tower of Babel), also possess ambivalent implications for attitudes about climate change. As Kate Rigby has shown (16f.), the general acceptance of the notion of ‘natural disaster’ since the eighteenth century may in part be a revulsion against the dominant conception of disasters in the medieval and early modern period as (divine) punishment for collective or individual transgressions. Playing on the psychological mechanism of guilt and longing for forgiveness (manifest in narratives in which the disaster is cast as cleansing from sin and followed by redemption), this involved blaming the victims, and came to appear manifestly unjust. (See also Weber.) However, the “naturalization” of disaster has engendered its own irrational notions and narratives, in the dualist myth of a hyper-separation of nature from culture, which promotes a hostile attitude towards the natural world at the very time when we need to appreciate the connectivities, material and moral, linking human wellbeing with that of other living beings and the biophysical systems which enable or endanger our collective flourishing (Rigby 10).

Rigby’s critique of the ‘dominological’ perspective on our relationship with nature and the narratives through which it is articulated is grounded in the posthuman and material feminist theories through which Donna Haraway, Bruno Latour, Jane Bennett and others working at the interface of cultural studies and the natural sciences have redefined human subjectivity, acknowledging the agency of other forms of life and the power of the environment to shape our existence. Approaching climate change as a part-natural, part-cultural phenomenon comparable

to earlier disasters including earthquakes, pandemics, floods and bush fires, she argues that research in the humanities can provide an enhanced understanding of the complex interplay between cultural factors and geophysical processes in the genesis, unfolding and aftermath of calamities through analysis of historical interpretations and narrative fictions. Novels in particular provide a basis for critical examination of the ontological, epistemological, and ethical underpinnings and implications of the contradictory stories we tell about climate change and other ‘natural’ disasters (Rigby 4).

For literary and cultural critics, the challenge is not merely one of critically analyzing the ‘pathology’ of cultural representations of our relationship with nature, but also one of defining the role which imagination, art and writing might play in contributing to the development of a new subjectivity and culture involving a posthuman identity, and of identifying creative possibilities and aesthetic forms fit for the task. Can novels, essays, plays and poems foster an ‘eco-cosmopolitan’ consciousness? (See Heise, especially 50-62.) Critics such as Martha Nussbaum and Derek Attridge have argued that literature makes a distinctive contribution to contemporary discourses on subjects like the environment through its focus on the social, psychological and cultural impact of change, its exploration of issues of agency and responsibility, and its ability to promote mental and emotional expansion and change in the reader (Attridge 77). According to Attridge, a key dimension of the “specificity” of literature lies in the mediation of alterity (2). Literary texts are distinguished by vividness, immediacy, cogency (including congruence of form and content), and an appeal to the emotions as well as the intellect. Working with personalization, dramatization and emotional focalization, they expose the public to the experiences of others, and distribute readers’ empathy in ways which lead them to break down existing habits of thought and identify with new perspectives. (Darko

Suvin has argued similarly that encouraging new ways of thinking about society is a key aim of science fiction, which occupies a central place in writing about climate change, and coined the term ‘cognitive estrangement’ for its strategy of factual reporting of fictions, leading us to question our assumptions about reality.) Novels have the ability to help us recognize emotionally what we know merely cognitively, and push the boundaries of what is imaginable by the public at a given moment. In *Love’s Knowledge*, Nussbaum writes similarly of “complex particularity” as the key to literature’s uniqueness, and argues that it can elicit from readers an open-ended activity of searching and nuanced understanding grounded in both cognition and emotion, by setting an example of holding open “the possibility of surprise, bewilderment and change” (33).

Novels tend to frame choices either by embedding them in moral or religious frameworks, or by aligning them in a more general way with traditional patterns of thought and cultural narratives. This can be a process of creative adaptation and innovation, and seeking to engage and mobilize readers, but as Raymond Williams observed in *Marxism and Literature*, by no means all literary texts articulate emergent, socially beneficial structures of feeling: many circulate dominant or residual perceptions and values. And some are hindered in their attempt to express emergent ones through uncongenial artistic forms and conventions. Ursula Heise has shown in *Sense of Place, Sense of Planet* how perceptions of global warming are shaped by and filtered through narrative templates. Information about risks is organized into intelligible and meaningful stories by means of rhetorical tropes and genres (Heise 138). Two particularly influential modes of writing have been Apocalypse, which plays on fears and conveys a sense of the extreme urgency of radical action, and Pastoral, which conjures up images of harmonious living and cultivates a feeling of loss and potential restoration. Other genre models include the

detective story (which evaluates clues and exposes criminals), and the *Bildungsroman* or novel of development (in which the protagonist comes to recognise the dangers from climate change).

Rhetorical and genre traditions postulate certain causal consequences, make some scenarios plausible and others less so, make some appear more threatening than others, and outline likely future courses of events. But what genres and narrative forms are equal to the task of representing something as abstract as climate change, which is measured in fractions of degrees and parts per million of carbon dioxide in the atmosphere? How can changes which are global rather than relating to any identifiable place, and which take place so infinitesimally slowly, be adequately represented? Stories are traditionally focused on the actions of individual characters, whereas in the Anthropocene, we are dealing with humankind as a species, and nature as an intervening force. Must we therefore take leave of certain kinds of narrative, and what alternatives to them are there?

In its efforts to answer these questions with respect to fictional narratives, literary ecocriticism has focused on the handling of matters of ethics and identity, the affective function of texts, the cultural traditions and narratives they draw on, and questions of form and aesthetics. The first significant ecocritical study of climate fiction was Adam Trexler and Adeline Johns-Putra's review article, "Climate Change in Literature and Literary Criticism" (2011). The year 2015 saw an explosion of interest in the subject, with Adam Trexler, Timothy Clark, and Patrick Murphy all publishing book-length studies of climate fiction, charting its emergence as a 21st-century genre and critically assessing its achievements. At the same time, climate novels have attracted considerable media interest and been the subject of web blogs and sites such as Dan Bloom's "Cli-Fi Report" and Andrew Dobson's listing and commentary on "Eco-Apocalypse Novels". In Germany, Eva Horn has examined historical and literary narratives of natural

disaster, demonstrating their roots in apocalyptic tales since the Romantics and exploring their ambivalent motivation. (See additionally Dürbeck 2012, also Faust and Soentgen on the role played by myths in climate change discourse.) Sylvia Mayer has discussed the shaping influence of genres in the literary representation of risk (2014), and published a thoughtful introductory article on climate change novels which includes discussion of Ilija Trojanow's *EisTau* together with Barbara Kingsolver's *Flight Behavior* and Ian McEwan's *Solar* (2015). Berbeli Wanning has written about climate change in young adult literature; Gabriele Dürbeck and Wanning about the eco-thriller.

This recent critical interest reflects the emergence of a growing body of novels, essays, plays and poems addressing the subject of anthropogenic global warming. In the twenty-first century, climate change stories have become popular vehicles for reflection on our values and way of life, on patterns of material consumption and the relationship between individual and society, giving expression to feelings of anxiety and guilt, and asking what sort of future we want ourselves and others to live in. Ecocritics such as Horn and Rigby have set contemporary novels in the historical and cultural context, and reread older texts, foregrounding parallel themes and concerns in them. Two of the five texts which Rigby devotes chapters to are German: Kleist's *Erdbeben in Chile* and Storm's *Schimmelreiter*. In both cases, she discerns a challenge to anthropocentrism, and an alternative to both religious stories ending in redemptive violence and secular, hyper-rationalist narratives othering nature as a hostile entity to be forced into submission.

Meanwhile a separate body of work on how the story of climate change is being and might be told has been carried out in environmental communication and media studies. Narratives and images associated with different framings and scenarios of climate change have



been examined in the print and digital media, in popular science books and climate change manuals, and in international climate agreements. Among the most insightful of such studies adopting a discourse analysis or frame analysis approach, drawing out underlying assumptions, placing texts in historical and political context, and critically assessing their implications, has been Mike Hulme's book, *Why We Disagree about Climate Change*. Other work includes Maxwell Boykoff's study, *Who Speaks for the Climate? Making Sense of Media Reporting on Climate Change* and articles in journals ranging from *Public Understanding of Science* to the *Journal of Historical Geography*, *Environmental Science and Policy*, *Environmental Communication*, and Wiley's *Climate Change*. Book chapters include Philip Smith's contribution, "Narrating Global Warming," in the *Oxford Handbook of Cultural Sociology*, and Ursula Kluwick's "Talking about Climate Change: The ecological crisis and narrative form," in the *Oxford Handbook of Ecocriticism*. The stories told in climate fiction are part of this more general picture of the discursive construction of climate change, and the value of studying them depends largely on their contribution to the wider social discourse on climate.

## **2. Climate Fiction as a 21<sup>st</sup>-century genre**

Trexler and Johns-Putra were the first to propose the existence of a discrete genre of Anglophone climate fiction. They claimed that climate change is not merely a theme: a distinctive form had also emerged, combining fictional plots with meteorological fact, speculation on the future, and reflection on the human-nature relationship. The first of about thirty significant novels, Arthur Herzog's *Heat* (1976), predated broad public concern with climate change. Since then, most climate change fiction in America and Britain has belonged to one of three genres: Science Fiction, the Thriller, and the Dystopian novel. Frequently, elements of all three are combined.

Examples of science fiction writing on the climate, which is usually less concerned with technology than classical sci-fi, and more accurately described as speculative future fiction, include George Turner's *The Sea and the Summer* (1987), Kim Stanley Robinson's "Science in the Capital" trilogy (2004-7), and Paolo Bacigalupi's *The Windup Girl* (2011). Well-known examples of the eco-thriller are Michael Crichton's *State of Fear* (2004) and Clive Cussler's *Arctic Drift* (2008). Crichton's book has the most prominent in a subset of novels articulating a position of climate scepticism. Of the dystopian novels, which are usually set in a post-apocalyptic world, the best known is probably *The Road* (2006), although it is not clear whether the grim future which Cormac McCarthy depicts has actually resulted from climate change. Professional critical interest has tended to focus on more complex works with 'literary' qualities rewarding analysis, such as Maggie Gee's *The Ice People* (1998), T.C. Boyle's *A Friend of the Earth* (2000), Margaret Atwood's *Maddaddam* trilogy (2003-13), and Jeanette Winterson's *The Stone Gods* (2007). In a minority of novels including Ian McEwan's *Solar* (2010) and Barbara Kingsolver's *Flight Behaviour* (2012), the action takes place in the present or the near future, and the focus is on the exploration of political, ethical and psychological problems. Novels about climate change written for young adult readers such as Saci Loyd's *The Carbon Diaries 2015* (2009) form a separate category.

Novels concerned with anthropogenic climate change are naturally found in other countries too, and in other languages. Ignácio de Loyola Brandão's Brazilian novel, *And Still the Earth* (1982) and Michel Houellebecq's French bestseller, *The Possibility of an Island* (2005) make distinctive contributions. Of the thirty or so works of German climate fiction, the first was probably *Der Planet schlägt zurück. Ein Tagebuch aus der Zukunft* (1993), by the left wing journalist and political commentator Anton-Andreas Guha. Guha, who had gained a reputation

for his critical coverage of German security and defense policy for the *Frankfurter Rundschau* in the 1970s, published a post-apocalyptic novel in 1983, at the height of late Cold War tension and the nuclear rearmament debate in Germany. *Ende: Tagebuch aus dem 3. Weltkrieg* depicted life in Europe after a nuclear exchange, and was widely read in the Peace Movement. *The Planet Strikes Back* adopts a similar diary form, and although unambitious in terms of its exploration of psychological and ethical issues, it integrates extensive factual information on how Europe may be affected by climate change in the next fifty years, presenting a powerful case for action to halt global warming.

A second German journalist, Dirk Fleck, has published a trilogy of climate novels based on extensive research, packaging realistic speculation about likely developments in the next fifty years in the thriller genre (A more detailed analysis of some of Fleck's works follows in Gabriele Dürbeck's chapter). *GO! Die Ökodiktatur* appeared in 1994. The action is set in Europe in 2040. A third of the world's population has either died in the revolution which took place in 2020, or since been lost to aids, cancer, and degenerative diseases. Europe, America and Japan are governed by secretive Eco-Councils. Everyone aged between 18 and 55 is put to work on the state's ecological reconstruction program, and punishment meted out for crimes against the environment (such as eating meat) includes forced labor in rehabilitation camps. *GO!* illustrated what Fleck saw as the dilemma facing humanity: the only effective way of combating climate change may be eco-fascism. Whether this will restore the planet to health, or is merely postponing further decline into a global environment inhospitable to human life, is left open. The novel alternates between narrative strands introducing different aspects of future society through their impact on the lives of individuals. These represent a range of standpoints and give insight into the choices facing those who come to oppose the authoritarian regime. The author's own

position would seem to be one of profound pessimism regarding the future, grounded in an essentially negative view of human nature. A glimmer of hope for an alternative is, however, offered at the end of the novel.

In a commentary appended to the 2006 reprint, Fleck claimed his aim was to provoke the public into taking action while there was still time for it to make a difference. Provocative ambivalence with regard to eco-fascism is in fact a strength of this novel, which integrates elements of adventure, romance and eco-horror in a narrative interspersed with cultural allusions, including echoes of George Orwell's *Animal Farm* and *Nineteen Eighty-Four*, with their themes of the betrayed revolution, and the dangers of subordination of the individual to the collective. Chided for his pessimism, Fleck wrote a second, ecotopian novel incorporating detailed information on radical economic reform, renewable energy, environmentally friendly transport, and an education system oriented towards sustainability in an exotic South Sea setting. In *Das Tahiti Projekt* (2007), this content is framed in a conversion narrative, in which the central character, a middle-aged Hamburg environmental journalist, embarks on a personal journey from despair to hope. Fleck's environmental optimism had evaporated by the time he wrote *Maeva!* four years later. This novel presents a range of different political responses to the climate crisis, including a spiritually inflected form of cultural ecofeminism, and experiments with their interaction and outcomes.

Different mixes of dystopian science fiction, fantasy and thriller have followed in *Der Mann von IDEA. Berlin: 33 Jahre nach der Klimakatastrophe*, another post-apocalyptic tale, penned in 1995 by the East German science fiction writer Karl-Heinz Tuschel, Till Bastian's *Tödliches Klima* (2000), which is set in present-day Turkey and explores the implications of climate change for the geopolitics of the Middle East in a fast-paced plot with terrorists and

spies, Frank Schätzing's hugely successful eco-thriller, *Der Schwarm* (2004), Wolfgang Jeschke's richly complex sci-fi tale, *Das Cusanus-Spiel* (2005), Ulrich Hefner's conspiracy story, *Die dritte Ebene* (2008), Dieter Oesterwind's "political drama", *Steinerne Glut* (2008), Klaus Peter Lehner's exercise in horror, *Natürlich grausam* (2008), and more recent publications by Klaus Kormann, Sonja Margolina, and Norbert Stöbe. Journalists and scientists often serve as focalizers. Climate novels focused on women's experience of and perspectives on climate change include Sibylle Berg's *Ende gut* (2004) and Liane Dirks's *Falsche Himmel* (2006): here action, drama and plot are less important than poetic exploration of subjectivities. Novels for young adults include Claus-Peter Hutter and Eva Goris's *Die Erde schlägt zurück – Wie der Klimawandel unser Leben verändert* (2009), in which narrative chapters on the lives of a people ranging from politicians and scientists to farmers struggling to survive the floods, disease and dangers in a society collapsing under the impact of climate change are accompanied by informative non-fiction accounts of its various consequences; and Cornelia Franz's *Ins Nordlicht blicken* (2012), to which I will return. Post-Climategate novels taking a skeptical stance towards climate science and politics include Christian Kracht and Ingo Niermann's satirical essayistic work of eco-blasphemy, *Metan* (2008), Sven Böttcher's *Prophezeiung* (2011), a thriller set in the near future combining the revelation of a conspiracy with action and romance, and Nele Neuhaus's *Wer Wind sät* (also 2011), a bestseller whose plot echoes Crichton's *State of Fear*.

Local interest plays a key role in Manfred Boeckl's "Bavarian eco-apocalypse," *Die Einöder* (2007) and Helmut Vorndran's "Franconian crime story," *Blutfeuer* (2010), a blend of authentic depiction of place with a dramatic scenes of hurricane damage, a predictable thriller plot, and some wildly implausible features (in the Epilogue the unnatural heat appears to recede and the colossal storm damage is repaired, albeit over years). The landscape comes center stage

in W.G. Sebald's *Die Ringe des Saturn* (1995), which describes a walking tour in East Anglia (climate change is not mentioned explicitly, but its consequences are observed in the form of extreme weather), and in Franz Friedrich's poetic evocations of Scandinavia in *Die Meisen von Uusimaa singen nicht mehr* (2014).

To sum up this brief overview, the violent storms, floods, food and water shortage, disease and desertification, and the social collapse, climate refugeeism and armed conflict arising out of them which have been the main manifestations of climate change in the German novel can doubtless be understood in part as variants of the glut of fanciful, catastrophist imaginings of humanity's demise around the end of the millennium, driven by a sense that nature will one day take revenge on our unsustainable population growth and patterns of consumption. Sensational depiction of climatically induced natural events and alarmist dramatization of the ensuing human predicaments and conflicts, and the integration of apocalyptic images are frequently encountered strategies. While authors tend to claim it is their intention to provoke readers into changing their way of thinking and taking action on the climate, the dystopian genre is undoubtedly chosen in some cases for the shock, excitement and entertainment value it affords, rather than its mobilizing potential.

However, the apocalyptic scenarios in bestsellers like *Der Schwarm* have not entirely dominated German climate fiction. Especially but not only in educationally motivated young adult fiction, writers tend to work with reasoned arguments as well as the power of affect, and to use journalists and scientists as central figures as a way of introducing factual information. Climate novels have explored issues relating to the uncertainty of climate science, the openness of scientific practice to economic interests and political manipulation, the role of the media in subjecting the state and industry to public scrutiny, the efficacy of protest action, environmental

justice, and personal responsibility. Works such as Sebald's and Friedrich's recalling the loss of landscapes, plants and animals, celebrating natural beauty, and sensitizing readers towards it through empathetic attention to detail and poetic language, constitute an alternative approach.

In the following, I rehearse briefly some of the key challenges faced by climate change novels in terms of form and narrative strategy, before asking what solutions Ilija Trojanow and Cornelia Franz have arrived at in *EisTau* (2011) and *Ins Nordlicht blicken*.

### **3. Challenges of form in narrating climate change: Ilija Trojanow's *EisTau* and Cornelia Franz's *Ins Nordlicht blicken* in comparison**

In an article written in 2005, the nature writer and critic Robert Macfarlane suggested that novels can provide the “imaginative repertoire [...] by which the causes and consequences of climate change can be debated, sensed, and communicated.” With its special ability to allow us to entertain hypothetical situations, alternative lives, futures, and landscapes as if they were real, literature has, he claimed, a role to play in leading us to think differently, alter our habits of consumption and take political action. But climate change presents the literary imagination with a series of difficulties. Above all, Macfarlane argues, writers must find ways of imagining which avoid the temptation to indulge in apocalyptic scenarios and remain honest to scientific evidence.

Perhaps the greatest difficulty facing the author of climate fiction is that climate change is such a complex and amorphous socio-ecological phenomenon. Imperceptible to the senses, and only understandable cognitively, it is difficult to depict without resorting to falsifying oversimplification. The deep time and global scale of climate change cannot be readily mapped onto the localized experience and limited timespan of human life, and global warming does not easily fit in the scheme of genre conventions geared towards depiction of human conflicts and

individual psychological development, or narrative frameworks involving closure. Macfarlane's second requirement, truth to the scientific facts, demands of the author both knowledge and skill in integrating the necessary material into the narrative. In the final chapter of *Ecocriticism on the Edge*, Timothy Clark argues (175-83) that literature performs a vital bridging function, joining up climate science with what readers find "interesting". That is, its job consists of presenting climate change in the framework of a story which awakes the reader's curiosity. This usually means embedding it in a tale of human conflict, the psychological development of an individual, or the overcoming of a crisis. The result can, however, be that the ecological process appears as a mere symbolic representation of a turning point in the protagonist's life. Clark asks if traditional narrative strategies (and also modes of interpretation) that once seemed sufficient or progressive have become inadequate or even latently destructive in the new, counter-intuitive context of the Anthropocene. He calls for a critical assessment of the role of genres, modes of writing, myths, and symbols by means of which events are invested with meaning and value through association with desires and fears, emotions and subject positions are legitimated, readers' expectations are aroused, and the resolution of conflicts and problems is dictated.

Ilija Trojanow's "requiem for the future," *EisTau* and Cornelia Franz's young adult novel, *Ins Nordlicht blicken*, share a polar setting, and melting ice as a central symbol: they both contain a key scene in which a melting glacier is depicted as a great suffering creature, and functions as an emotion-laden icon of global warming. Snowcapped peaks, glaciers and icebergs, traditional markers of the eternal and the sublime, have become symbols of transience and human degradation of the environment. Once epitomizing nature's otherness, wildness and indifference to man, and associated with purity, simple living, and heroic nobleness of spirit, they are here shown as dissolving into shapeless, soiled banality. Both novels echo the 'nature



cure' master plot, with the protagonist attempting to recover from personal trauma by seeking out a pristine wilderness, only to discover it is fast disappearing. However, they are both more complex in terms of narrative strategy than this suggests.

*EisTau* explores the physical, social and psychological consequences of climate change through the story of a Bavarian climate scientist whose life is thrown into crisis when the Alpine glacier which he has spent his professional life observing and measuring melts away to nothing. But while the novel is a passionate condemnation of modern society's destruction of the environment, at the same time it acknowledges that this approach is misanthropic when taken to the extreme. Trojanow's book exemplifies the tensions in contemporary climate fiction between confessional and didactic impulses on the one hand, and recognition of the need for an aesthetic form avoiding the shortcomings of the elegiac mode and apocalyptic imagery on the other.

In 2010 Trojanow published an essay entitled „Requiem auf die Zukunft. Wie schreibt man einen Roman über die Klimakatastrophe?“ He began by noting that climate change had effectively prompted him to write his very first literary piece, an account of the terrible consequences of drought he had experienced in northern Kenya. Growing up in Africa as a privileged foreigner, he felt ashamed at being unable to help when people around him were starving and dying. But for a long time he had been unable to find a literary form capable of doing justice to a catastrophe which was so overwhelming in size, and involved suffering at such a remove from his readers. At first, he could see no solution to the problem. However, he started having a recurring nightmare. In his dream, a glaciologist lay on a heap of muddy boulders, mourning the loss of a glacier he had been emotionally attached to since childhood. Relating climate change to a fictional character who combined scientific knowledge with such powerful emotion gave Trojanow the angle he needed to write about it. He decided to set his novel in the

Antarctic, where his protagonist, Zeno Hintermeier, seeks comfort in an environment so far largely untouched and intact. Zeno leaves the research institute in Munich where he has been working, and takes a job as lecturer and guide on a cruise ship doing Antarctic tours. However, the impact of climate change is already visible in the melting ice sheets of the Western Antarctic, and he is increasingly alienated by the rich passengers' lack of genuine respect for nature. The purpose of his novel, Trojanow reflects, will be to make his readers take Zeno seriously, to make them identify with his radical passion. Alongside Zeno's wounded, angry voice, the book will, however, need a second layer of reality, showing him as a prophet crying in the wilderness. This will be conveyed partly through the reactions of the other characters, and partly through passages made up of advertising slogans and cynical turns of phrase from the media.

The principal mode of writing in *EisTau* can be described as "disrupted pastoral." It is a lament warning readers to change their way of life. The greater part of the text consists of entries in Zeno's diary, which switch to and fro in a stream of consciousness between his account of events on the cruise, lyrical passages describing the landscape, and autobiographical reflections. Increasingly embittered diatribes against humanity make him a figure of ridicule, and leave him facing dismissal. When a celebrity performance artist flies in to organize an event designed to draw public attention to the threat to the Antarctic from global warming, Zeno hijacks the cruise ship and steams off into the South Atlantic Ocean, leaving the passengers stranded on an ice floe. His final act is to let himself overboard to drown in the icy waters. At the heart of the novel is the conviction that, anaesthetized by consumption, we have ceased to see, hear and feel nature. However, Trojanow's endorsement of his protagonist appears highly ambivalent when he presents Zeno's relationship with "his" glacier as that of a lover, and when he shows him slipping again and again into moral indignation, in Jeremiads predicting the extinction of the

human race. Between the lines, Zeno is revealed to be a coward, hypocritically blind to his personal exploitation of people around him.

*EisTau* is a flawed work, because of the unresolved contradictions in the figure of Zeno, but it is a revealing one in terms of narrative strategy, for Trojanow seeks to avoid the excesses of moralizing environmentalist affect by means of a series of limiting mechanisms. First, there is his choice of a scientist as protagonist, which enables him to bolster emotion with reason and scientific expertise. Secondly, as we have seen, Zeno is an unreliable narrator, whose direct emotional appeal to the reader is qualified by exaggeration of his sorrow, anger and despair to extremes of apocalyptic pessimism. Thirdly, he seeks to alleviate the intensity of the pathos and afford relief from the book's gloomy message of man's incompatibility with nature with a number of humorous and satirical episodes. And finally, there is his alternation of Zeno's diary entries with short chapters consisting of phrases from the language of advertising, interspersed with news flashes and radio messages exchanged by sea and air controllers and the pilots of ships and aircraft, at a time after the end of the narrative, which gradually reveal what Zeno has done. A key function of this verbal material is to convey the commodification of human relations in pornography and prostitution, and that of nature in package tourism. Trojanow thus critiques both Zeno's naïve striving for oneness with nature and its exploitation and destruction through climate change. But the book lacks a third voice advocating an alternative position of ecological materialism.

Cornelia Franz fares somewhat better in terms of coherence of narrative. *Ins Nordlicht blicken* tells the story of Pakku Wildhausen, whose father emigrated from Germany to Greenland in the early 1990s and married an Inuit girl. Pakku's mother died when he was a baby, and he was brought up by his paternal grandmother back in Germany. When he was aged 9, she died,

and he was sent to live with his alcoholic father in Nuuk, the capital of Greenland. After seven unhappy years there, Pakku escapes back to Germany as a stowaway on a cruise ship, and is led by chance encounters to become a sculptor. Nine years later he wins a prize and decides to use the money for a trip to Greenland, to see if he can find his father. As in *EisTau*, the action in the novel takes place at two different times. Chapters alternate between Pakku's life as a teenager in Nuuk in the months leading up to his departure for Hamburg in 2011, and his trip back to Greenland in 2020 to find out about his past. And as in Trojanow's novel, the dramatic events which have taken place at the end of the first narrative, and precede the second one, are gradually revealed, with the two time lines coinciding towards the end the book. In *Ins Nordlicht blicken*, the action also alternates between first and third person narration, but Pakku is the sole focalizer.

In terms of genre, the book is a coming-of-age story, and a love story, with passages resembling travel writing describing the majestic landscape of Greenland. It is also a quest, in which Pakku learns that his father has died, and uncovers the truth about his mother. Returning to Greenland, he comes to accept his hybrid identity as a German-Greenlander, conquers his depression and fears, and overcomes the emotional block from which he has been suffering.

At first Pakku does not take seriously what his father says about climate change: he rejects the notion that it will one day be warm enough in Greenland to keep bees and make honey as a drunken obsession. Even in 2020, life in Germany seems to go on much as before, despite passing references to catastrophes such as the flooding and abandonment of New York, a great flood in Hamburg harbor, and devastating storms in Cuba and the Philippines. However, by 2020 Greenland has become noticeably warmer and greener. Trees grow where there had previously been nothing larger than shrubs. Positive developments include new technologies for transport, energy generation by wind turbines and solar panels, and much improved housing. For most

Greenlanders, life has got better. Nevertheless, the shrinking ice has brought pollution from the exploitation of oil and mineral resources and even among Inuits in the north, the old way of life with dog sleighs and seal hunting is now something performed for tourists.

Global warming is therefore deeply ambivalent. On balance it is primarily associated with environmental destruction and the exploitation of the poor and weak by powerful political and economic interests. Pakku learns that his mother's death from a heroin overdose was a long-term consequence of the establishment of an American military airbase near her village in the 1950s which necessitated the transfer of the native population to a soulless new town, resulting in high levels of alcoholism, drug taking, murder, suicide and rape. Some of her family have also been contaminated with plutonium when cleaning up without adequate protection after the crash of a B52 bomber. He recognizes in these events the real reasons for his father's alcoholism and his own blighted youth. Cornelia Franz thus depicts the psycho-physical and socio-cultural legacies of the Greenlanders' colonial exploitation. However, her references to the Greenland Traditional Movement suggest that while it has an important part to play in the country's ecological, social and cultural renewal, return to a traditional way of life is not a viable solution to today's problems.

*Ins Nordlicht blicken* is a classic novel of development, mapping climate change onto "topics and psychological and cognitive structures that constitute the 'interesting'" (Clark 176) in exemplary fashion, by fusing it with "human drama, [...] humor, suspense, love interest and psychological identification" (178). The trajectory is not that of despair and death in Trojanow's book, but rather one of hope, self-discovery, and learning to speak. The author's fundamental strategy is one of critical enlightenment, not gloomy provocation, and Cornelia Franz appeals not to nostalgia or fear, but to our sense of justice. However, the book also conveys some subtler

messages. It is a story about what stories are told about climate change, with Pakku neither completely believing those who paint an apocalyptic picture of its consequences, nor entirely trusting in the naïve optimism of the members of the Greenland Tradition Movement, who cite an “ancient prophesy:” “Wenn das große Eis schmilzt, die Erde in Bedrängnis ist und auf Grönland wieder Bäume zu wachsen beginnen, wird das Heilige Feuer auf die Insel zurückkehren und mit ihm wird eine neue Weisheit in die Welt ziehen” (33). Melting ice proves to be an ambivalent symbol, associated on the one hand with environmental damage and the painfully felt loss of a traditional way of life, but on the other with the thawing of Pakku’s personal inner frozenness, his emergence from silence and the suppression of his emotions, overcoming his panic attacks and learning to open up to others.

In sum, while neither author departs radically from conventional narrative forms, both Trojanow and Franz adopt strategies to avoid the problematic qualities of apocalyptic thinking. Narrating climate change means facing four problems: a) spatial scale, b) time scale, c) agency, and d) narrative closure. In both the books examined, the place described is deterritorialized, inasmuch as it is represented as standing in multiple connections to other places. In this sense, both Trojanow and Franz move towards the multi-scalar spatial representation which, as Sylvia Mayer notes, is demanded by climate change. The fact that climate change affects different places and people differently, bringing both gain and loss, is also stressed in *Ins Nordlicht blicken*. In respect of time too, these novels avoid the foreshortening of perspective on climate change commonly encountered in climate change films. In the case of Franz’s book, this is achieved by juxtaposing temporalities nine years apart.

Looked at in terms of agency, neither narrative exposes “the illusions of autonomous personhood [...], the presence or intervention of the nonhuman in the human field of perception,

or [...] the finitude and thingness of the human itself” (Clark 187). Neither goes beyond the traditional focus of narratives on individual development and social questions by having multiple narrators, or a non-human narrator, as does Dale Pendell’s book, *The Great Bay. Chronicles of the Collapse* (2010), which combines loosely connected stories (third-person narration, journal entries, news items and interviews tracing the history of California after a virus has decimated the population) with “future history” sections telling about societal and geographical changes as the climate changes. Neither author aspires to what Kate Rigby describes in the final chapter of her study, *Dancing with Disaster* as the Australian Aboriginal author Alexis Wright’s “subversive decolonization of the very form of the novel”, by placing centre stage the story of the land, not just told about it, but “actually scripted” by it, in the novel *Carpentaria* (2006), whose nonlinear narrative switches between timeframes and storylines, voices and perspectives, restoring voice and agency to the colonized, both human and otherwise. (Rigby 167)

Finally, there is the question of narrative closure. Clark argues (178) that mapping something so impersonal, invisible and intangible as climate change onto the personal trajectory of an individual runs the risk of being evasive, for personal success implies resolution of the environmental crisis. This is indeed a weakness of both novels, although there is no suggestion in *Ins Nordlicht blicken* that the uplifting ending, in which Pakku finds a partner and becomes a father, has anything to do with climate change. For an effective alternative to linear narrative with its mandatory closure one must turn to *Die Ringe des Saturn*, in which W.G. Sebald’s use of essayistic travelogue is so much more ambitious than Trojanow’s and Franz’s depiction of journeys and landscapes. Sebald’s ruminative narrative, a melancholy lament at human cruelty, violence and destruction, in which environmental damage is set in a context of unstoppable natural decline and disintegration (the “natural history of destruction”), includes long digressions

to events, places and persons linked by their relationship to the theme of destructive modernization, and hints at an alternative way of relating to the natural environment, by schooling readers in empathetic perception, imaginative seeing, and attentive wording of experience. The use of montage or collage, which Ursula Heise advocates as a form more suited to the representation of climate change than conventional narrative, and illustrates with reference to David Brin's *Earth* (1990 – see Heise 80-85), might be seen to be gestured toward in the media babble chapters in *EisTau*. There is perhaps a closer parallel in Hutter and Goris's adoption of a strategy of "facts and fiction" in *Die Erde schlägt zurück*, where chapters with factual material on nine aspects of a "Scenario 2035" are paired with sections of narrative illustrating their impact on the lives of a range of people. The book also includes drawings, photos and diagrams, practical tips for climate action, the addresses of organizations, a glossary of terms, and suggestions for further reading.

Taken as a whole, German climate fiction has then come up with a variety of solutions to the problems of narrating climate change, drawing on different modes of writing, genres, and images to interrogate, challenge and complicate over-simplifications of climate change, and serving in different measures to provoke, inform, and mobilize readers.

## Works cited

### *Literary texts*

Bastian, Till. *Tödliches Klima*. Riemann, 2000.

Berg, Sybille. *Ende gut*. Kiepenheuer and Witsch, 2004.

Boeckl, Manfred. *Die Einöder. Leben im bayerischen Wald nach der Klimakatastrophe*. Ohetaler Verlag, 2007.



- Böttcher, Sven. *Prophezeiung*. Kiepenheuer and Witsch, 2011.
- Dirks, Liane. *Falsche Himmel*. Kiepenheuer and Witsch, 2006.
- Fleck, Dirk C. *GO! Die Ökodiktatur. Erst die Erde, dann der Mensch*. Rasch und Röhrig, 1994.
- . *Das Tahiti Projekt*. Pendo, 2007.
- . *Maeva!* Greifenverlag, 2011.
- Franz, Cornelia. *Ins Nordlicht blicken*. dtv, 2012.
- Friedrich, Franz. *Die Meisen von Uusimaa singen nicht mehr*. S. Fischer, 2014.
- Guha, Anton-Andreas. *Ende: Tagebuch aus dem 3. Weltkrieg*. Athenäum, 1983.
- . *Der Planet schlägt zurück. Ein Tagebuch aus der Zukunft*. Steidl, 1993.
- Hefner, Ulrich. *Die dritte Ebene*. Öko-Thriller, Goldmann, 2008.
- Hutter, Claus-Peter and Eva Goris. *Die Erde schlägt zurück – Wie der Klimawandel unser Leben verändert*. Droemer, 2009.
- Jeschke, Wolfgang. *Das Cusanus-Spiel oder ein abendländisches Kaleidoskop*. Droemer, 2005.
- Kormann, Klaus. *Samanthas Traum*. Nepa, 2012.
- Kracht, Christian and Ingo Niermann. *Metan*. Rogner und Bernhard bei Zweitausendeins, 2007.
- Lehner, Klaus. *Natürlich grausam*. Hierophant, 2008.
- Margolina, Sonja. *Kaltzeit*. 2013.
- Neuhaus, Nele. *Wer Wind sät*. Ullstein, 2011.
- Oesterwind, Dieter. *Steinerne Glut*. Edition XIM Virgines, 2008.
- Schätzing, Frank. *Der Schwarm*. Kiepenheuer und Witsch, 2004.
- Sebald, W.G. *Die Ringe des Saturn. Eine englische Wallfahrt*. Eichborn, 1995.
- Stöbe, Norbert. *Morgenröte*. Heyne, 2014.
- Trojanow, Ilija. *Eistau*. Hanser, 2011.

Tuschel, Karl-Heinz. *Der Mann von IDEA. Berlin: 33 Jahre nach der Klimakatastrophe*. GNN, 1995.

Vorndran, Helmut. *Blutfeuer*. Emons, 2010.

Wallner, Michael. *Die Zeit des Skorpions*. cbt/cbj, 2008.

### *Secondary literature*

Attridge, Derek. *The Singularity of Literature*. Routledge, 2004.

Bachmann, Hartmut. *Die Lüge der Klimakatastrophe. ... und wie der Staat uns damit ausbeutet. Manipulierte Angst als Mittel zur Macht*. 6th ed., Frieling, 2010.

Bloom, Dan. "The Cli-Fi Report," <http://cli-fi.net/>

Boykoff, Maxwell T. *Who Speaks for the Climate? Making Sense of Media Reporting on Climate Change*. Cambridge UP, 2011.

Chakrabarty, Dipesh. "The Climate of History: Four Theses." *Critical Inquiry* vol. 35, Winter 2009, pp. 197-222.

Clark, Timothy. *Ecocriticism on the Edge. The Anthropocene as a threshold concept*. Bloomsbury, 2015.

Crutzen, Paul J. and Eugene F. Stoermer. "The 'Anthropocene'." *Global Change Newsletter*, vol. 41, May 2000, pp. 17-18.

Daniels, Stephen and Georgina Endfield. "Narratives of Climate Change. Introduction." *Journal of Historical Geography*, vol. 35, 2009, pp. 215-222.

Dobson, Andrew. "Eco-Apocalypse Novels," <http://www.andrewdobson.com/eco-apocalypse-novels.html>

- Dürbeck, Gabriele. "Writing Catastrophes: Interdisciplinary perspectives on the semantics of natural and anthropogenic disasters." *Ecozon@*, vol. 3, no. 1, 2012, pp. 1-9.
- . "Ambivalent Characters and Fragmented Poetics in Anthropocenic Literature (Max Frisch, Iliya Trojanow)." *The Minnesota Review*, vol. 83, 2014 (Special Issue: *Writing the Anthropocene*, edited by Kate Marshall and Tobias Boes), pp. 112-121.
- . "Das Anthropozän im zeitgenössischen Ökothriller am Beispiel von Dirk C. Flecks *Das Tahiti-Projekt*." *Kulturökologie und Literaturdidaktik*, edited by Sieglinde Grimm and Berbeli Wanning, v&r unipress, 2015, pp. 83-100. [2015a]
- . "Ökothriller." *Ecocriticism. Eine Einführung*, edited by Gabriele Dürbeck and Urte Stobbe, Böhlau, 2015, pp. 245-57. [2015b]
- et al. "Human and Non-human Agencies in the Anthropocene." *Ecozon@*, vol. 6, no. 1, 2015, pp. 118-136.
- Faust, Eberhard. "Globaler Klimawandel, globale Klimakatastrophe: Mythische Elemente in der kulturwissenschaftlichen und medialen Diskussion." *Neutestamentliche Grenzgänge. Symposium zur kritischen Rezeption der Arbeiten Gerd Theißens* (Novum Testamentum et Orbis Antiquus 75), edited by Peter Lampe and Helmut Schwier, Vandenhoeck und Ruprecht, 2010, pp. 201-227.
- Goodbody, Axel. "Frame Analysis and the Literature of Climate Change." *Literature, Ecology, Ethics* (Anglistische Forschungen 432), edited by Timo Müller and Michael Sauter, Universitätsverlag Winter, 2012, pp. 15-33.
- . "Melting Ice and the Paradoxes of Zeno: Didactic impulses and aesthetic distancing in German climate change fiction." *Ecozon@*, vol. 4, no. 1, 2013, pp. 92-102.

- . "Risk, Denial, Narratives, and Images in Climate Change Fiction: Barbara Kingsolver's *Flight Behavior* and Ilija Trojanow's *Melting Ice*." *The Anticipation of Catastrophe. Environmental Risk in North American Literature and Culture*, edited by Sylvia Mayer and Alexa Weik von Mossner, Universitätsverlag Winter, 2014, pp. 39-58.
- Heise, Ursula K. *Sense of Place, Sense of Planet. The Environmental Imagination of the Global*. Oxford UP, 2008.
- Hollerweger, Elisabeth. "Die Zukunft grün schreiben oder schwarz malen? Szenarien des Klimawandels in kinder- und jugendliterarischen Future Fictions." *Globalisierung – Natur – Zukunft erzählen. Aktuelle deutschsprachige Literatur für die internationale Germanistik und das Fach Deutsch als Fremdsprache*, edited by Almut Hille et al., Iudicium, 2014, pp. 148-163.
- Horn, Eva. *Zukunft als Katastrophe*. S. Fischer, 2014.
- . "Die Zeit des Klimas. Zur Verzeitlichung der Natur in der literarischen Moderne," <http://www.aesthetische-eigenzeiten.de/projekt/klima/beschreibung/>
- Hulme, Mike. *Why We Disagree about Climate Change: Understanding Controversy, Inaction, and Opportunity*. Cambridge UP, 2009.
- Kerridge, Richard. "Ecocritical Approaches to Literary Form and Genre. Urgency – Depth – Provisionality – Temporality." *The Oxford Handbook of Ecocriticism*, edited by Greg Garrard, Oxford UP, 2014, pp. 361-76.
- Kluwick, Ursula. "Talking About Climate Change: The Ecological Crisis and Narrative Form." *The Oxford Handbook of Ecocriticism*, edited by Greg Garrard, Oxford UP, 2014, pp. 502-516.

Lejano, Raul P. et al. "Climate and Narrative: Environmental knowledge in everyday life."

*Environmental Science and Policy*, vol. 31, 2013, pp. 61-70.

Liverman, Diana M. "Conventions of Climate Change: Constructions of danger and the

dispossession of the atmosphere." *Journal of Historical Geography*, vol. 35, 2009, pp. 279-96.

Lowe, Thomas at al. "Does Tomorrow Ever Come? Disaster narrative and public perceptions of climate change." *Public Understanding of Science*, vol. 15, 2006, pp. 435-57.

Macfarlane, Robert. "The Burning Question." *The Guardian*, 24th September 2005.

Maxeiner, Dirk. *Hurra, wir retten die Welt! Wie Politik und Medien mit der Politik umspringen*. Wjs, 2007.

McGreavy, Bridie and Laura Lindenfeld. "Entertaining our Way to Engagement? Climate change films and sustainable values." *International Journal of Sustainable Development*, vol. 17, no. 2, 2014, pp. 123-36.

Mayer, Sylvia. "Explorations of the Controversially Real. Risk, the Climate Change Novel, and the Narrative of Anticipation." *The Anticipation of Catastrophe. Environmental Risk in North American Literature and Culture*, edited by Sylvia Mayer and Alexa Weik von Mossner, Universitätsverlag Winter, 2014, pp. 21-37.

---. "Klimawandelroman." *Ecocriticism. Eine Einführung*, edited by Gabriele Dürbeck and Urte Stobbe, Böhlau, 2015, pp. 233-44.

Mehnert, Antonia. "Climate Change Futures and the Imagination of the Global in *Maeva!* by Dirk C. Fleck." *Ecozon@*, vol. 3, no. 2, 2012, pp. 27-41.

- Moser, Susanne C. and Lisa Dilling. "Communicating Climate Change: Closing the Science-Action Gap." *The Oxford Handbook of Climate Change and Society*, edited by John S. Dryzek et al., Oxford UP, 2011, pp. 161-76.
- Murphy, Patrick D. *Persuasive Aesthetic Ecocritical Praxis: Climate change, subsistence, and questionable futures*. Lexington, 2015.
- Nussbaum, Martha C. *Love's Knowledge. Essays of Philosophy and Literature*. Oxford UP, 1990.
- Rigby, Kate. *Dancing with Disaster: Environmental Histories, Narratives, and Ethics for Perilous Times*. U of Virginia P, 2015.
- Smith, Philip. "Narrating Global Warming." *The Oxford Handbook of Cultural Sociology*, edited by Jeffrey C. Alexander et al., Oxford UP, 2012, pp. 745-60.
- Soentgen, Jens. "Mythische Formulare der Klimaskeptiker in Deutschland und den USA." *Zeitschrift für Didaktik der Philosophie und Ethik*, 2010, no. 2, pp. 72-7.
- Suvin, Darko. *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre*. Yale UP, 1979.
- Trexler, Adam. *Anthropocene Fictions. The Novel in a Time of Climate Change*. U of Virginia P, 2015.
- and Adeline Johns-Putra. "Climate change in Literature and Literary Criticism." *Wiley Interdisciplinary Reviews: Climate Change*, 2011, no. 2 (March/ April), pp. 185–200.  
DOI: 10.1002/wcc.105
- Trojanow, Ilija. "Requiem auf die Zukunft. Wie schreibt man einen Roman über die Klimakatastrophe?" *Der Standard*, 26th November 2010.

- Wanning, Berbeli. "Yrrsinn oder die Auflehnung der Natur – Kulturökologische Betrachtungen zu *Der Schwarm* von Frank Schätzing." *Kulturökologie und Literatur. Beiträge zu einem neuen Paradigma der Literaturwissenschaft*, edited by Hubert Zapf et al., Königshausen und Neumann, 2008, pp. 339-357.
- . "In der Hitze des Raumes. Das Ende der Kultur in Liene Dirks Roman *Falsche Himmel*." *Literarische Räume. Architekturen – Ordnungen – Medien*, edited by Martin Huber et al., Akademie-Verlag, 2012, pp. 273-84.
- . "Klima-Katastrophen. Weshalb Klimawandel (k)ein Thema für die Romanliteratur ist." *Orient im Okzident – Okzident im Orient: West-östliche Begegnungen in Sprache und Kultur, Literatur und Wissenschaft (Cross-Cultural Communication)*, edited by Ernest W.B. Hess-Lüttich and Yoshito Takahashi, Peter Lang, 2015, pp. 275-86.
- Weber, Christoph Daniel. *Vom Gottesgericht zur verhängnisvollen Natur: Darstellung und Bewältigung von Naturkatastrophen im 18. Jahrhundert*. Meiner, 2015.
- Williams, Raymond. *Marxism and Literature*. Oxford UP, 1977.

